

الصف الرابع الابتدائي ٢٠٢٣

بنك أسئلة

أ/ محمود سعيد



EL Motamyez Questions Bank

# SCIENCE

SECOND TERM FINAL REVISION

By

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نسخة  
مجانية

ملحق الإجابات  
بالداخل

 cartoon science



El.Motamyez.School

يمكنكم الحصول على المذكرات والاختبارات من خلال مسح رمز QR Code

أو من خلال صفحة "المتميز - أ/ محمود سعيد".

يرجى مراعاة حقوق صاحب المحتوى عند النشر

# EL MOTAMYEZ - SCIENCE Questions Bank

## FINAL REVISION

## QUESTION 01

## Choose The Correct Answer

**1** The unusable energy that produced from the electric lamp .....

(a) potential energy    (b) chemical energy    (c) thermal energy    (d) light energy

**2** The input energy used to control the Mars exploration vehicle is .....

(a) electric energy    (b) light energy    (c) kinetic energy    (d) mechanical energy

**3** The produced energy from radio that reflects its main function is .....

(a) electric energy    (b) sound energy    (c) light energy    (d) chemical energy

**4** Energy is the ability to do work. Which of the following is considered energy?

(a) air    (b) car    (c) water    (d) electricity

**5** The input energy when using the hair dryer is the ..... energy

(a) electrical    (b) potential    (c) kinetic    (d) thermal

**6** Some energy is lost in most devices in the form of ..... energy.

(a) electric    (b) thermal    (c) sound    (d) kinetic

**7** Electric wires are made up of ..... material.

(a) plastic    (b) aluminum    (c) iron    (d) copper

**8** During riding a bike, some kinetic energy is converted into ..... energy due to friction of bike's tire with the road

(a) chemical    (b) potential    (c) thermal    (d) electrical

**9** A plugged-in lamp can turn ..... energy to ..... energy.

(a) electrical, light    (b) kinetic, light    (c) chemical, light    (d) chemical, heat

**10** As energy transforms from one form to another, some of it is often lost as.....

(a) light    (b) heat    (c) sound    (d) movement

**11** Some electric devices need ..... energy to be recharged

(a) electrical    (b) thermal    (c) potential    (d) sound

**12** Spacecraft takes several ..... to reach Mars planet

(a) days    (b) years    (c) months    (d) minutes

**13** Energy doesn't destroy, nor create from nothing, this indicates .....

(a) the draining of energy resources    (b) conservation and transformation of energy    (c) resources of energy are numerous    (d) destroying the energy resources



**14** The idea of design and work of the robot that explores the surface of Mars depends on the idea of transforming .....  
 (a) electric to kinetic energy      (b) potential to kinetic energy  
 (c) light to electric energy      (d) kinetic to electric energy

**15** in our daily life we use devices which depend on energy forms. which of the following uses is true?  
 (a) computer depends on kinetic and electric energy  
 (b) ceiling fan depends on electric energy  
 (c) the function of television depends on the hydroelectric energy  
 (d) cell phones depend on potential and kinetic energy for operation

**16** In a battery of a toy car ..... energy changes into electrical energy.  
 (a) chemical      (b) sound      (c) thermal      (d) kinetic

**17** Curiosity rover is designed to explore .....  
 (a) Mars planet      (b) the Moon      (c) the sun      (d) Earth planet

**18** When you use the hand bell, the .... energy changed into sound energy  
 (a) Electrical      (b) potential      (c) thermal      (d) kinetic

**19** Both hair dryer and electric water kettle produce ..... energy.  
 (a) thermal      (b) light      (c) electric      (d) potential

**20** We can use the energy obtained from burning of wood in all of the following, except.....  
 (a) warming houses      (b) operating television.      (c) cooking food      (d) boiling water.

**21** .....is considered as the main resource of energy on the Earth's surface.  
 (a) Gasoline      (b) The Sun      (c) Natural gas      (d) The moon

**22** All the following are renewable resources of energy, except.....  
 (a) natural gas      (b) water      (c) the Sun      (d) wind.

**23** All the following are forms of fossil fuel, except.....  
 (a) water      (b) coal      (c) natural gas      (d) oil

**24** Non-renewable energy resources, take.....  
 (a) a short period of time      (b) a very long period of time      (c) few minutes      (d) few hours

**25** All the following are found deeply under the Earth's surface, except .....  
 (a) coal      (b) natural gas      (c) green plant      (d) oil

**26** Smog causes irritation of .....of humans  
 (a) stomach and eyes      (b) eyes and lungs      (c) small intestine      (d) large intestine

**27** Wood is considered as.....  
 (a) biofuel      (b) fossil fuel.      (c) liquid fuel      (d) gaseous fuel.

Next Concept



**28** All the following are used to generate electrical energy, except.....  
 (a) oil      (b) natural gas.      (c) waterfalls      (d) rain water

**29** Coal is formed under the Earth's surface from the remains of.....  
 (a) dead animals      (b) dead plants.      (c) dead humans.      (d) dead insects.

**30** Extreme heat and pressure under the Earth's surface has an important role in forming.....  
 (a) wood      (b) wind      (c) fossil fuel      (d) biofuel.

**31** Which of the following energy forms isn't produced from the Sun?  
 (a) Thermal energy.      (b) Light energy.      (c) Kinetic energy      (d) Radiation energy.

**32** Which of the following is a preferred natural resource to generate clean energy?  
 (a) Ocean and river water      (b) Trees and dry herbs.      (c) Water, coal, and oil.      (d) Wind, oil, and natural gas.

**33** The resource that we consume in a rate faster than its formation in nature.....  
 (a) Wind.      (b) Water.      (c) Solar energy.      (d) Fossil fuel.

**34** ..... is a renewable source of energy  
 (a) Coal      (b) Natural gases      (c) Water      (d) Fossil fuel

**35** The cause of preferring the use of wind and solar energies instead of coal and oil in producing energy is.....  
 (a) Wind and solar energies are non-renewable energies opposite to coal and oil.  
 (b) Using wind and solar energies is less expensive than coal and oil.  
 (c) Wind and solar energies are renewable energies opposite to coal and oil.  
 (d) Wind and solar energies have residues which negatively affect the environment.

**36** We can decrease the consumption of non-renewable sources of energy by using a source of clean energy except for.....  
 (a) energy produced from water turbines.  
 (b) energy produced from windmills.  
 (c) solar panels that exist on the roofs of houses.  
 (d) energy produced from burning benzene and natural gases.

**37** Energy produced from flowing water of waterfalls, dams and turbines is called.....  
 (a) mechanical energy      (b) hydroelectric energy      (c) chemical energy      (d) kinetic energy.

**38** All of the following are examples of renewable energy resources, except  
 (a) fossil fuel      (b) waterfalls.      (c) wind      (d) sunlight.

**39** Greenhouses allow farmers to plant crops that only grow in.....  
 (a) polar climate      (b) warm climate.      (c) absence of sunlight      (d) absence of water.



**40** The wind movement has ..... energy which moves the windmill's blades.  
 (a) kinetic (b) solar (c) thermal (d) potential

**41** When blades of turbine rotate, it generate ..... energy  
 (a) electrical (b) solar (c) chemical (d) potential

**42** Solar water heater changes ..... energy into ..... energy  
 (a) electrical – thermal (b) solar – sound (c) electrical – sound (d) solar - thermal

**43** When a rock's surface is eroded due to weather factors such as air or water, this indicates the occurrence of ..... process.  
 (a) weathering (b) deposition (c) transfer (d) erosion

**44** Dissolving metals forming rocks is an example for .....  
 (a) mechanical weathering (b) weathering by wind (c) deposition in rivers (d) chemical weathering

**45** Which of the following indicates the occurrence of chemical weathering process?  
 (a) Water freezes and increases in size, helping breaking down the rocks.  
 (b) Mixing the acidic water with rocks, and dissolving parts of them.  
 (c) Trees' roots grow extensively in rocks cracks, leading to their breaking down.  
 (d) Collision of rocks between each other in a fast-flowing water stream.

**46** Which of the following is not an example of erosion?  
 (a) The river carries the clay deposits to form sedimentary layers.  
 (b) The sea waves transfer sand and soil crumbs from the shore to the sea.  
 (c) The movement and accumulation of sand grains to form sand barrier.  
 (d) The dissolving of minerals in rocks due to water that goes through it.

**47** When rocks break down into small pieces, this indicates the occurrence of ..... process.  
 (a) mechanical weathering (b) chemical weathering (c) erosion by wind (d) erosion by water

**48** The rapid flow of river water leads to erosion of parts of the river banks. When it slows down, it transfers some sediment to new places, and then ..... process occurs.  
 (a) deposition (b) erosion (c) weathering (d) transferring

**49** Rush flow of water that carries sands during deposition process leads to .....  
 (a) chemical weathering of lime rocks.  
 (b) smoothing rough edges of rocks.  
 (c) erosion of sedimentary rocks layers.  
 (d) dissolving metals forming rocks.

**50** Forming red rust in sedimentary rocks is evidence of occurring ..... process.  
 (a) erosion of sedimentary rocks (b) mechanical weathering  
 (c) chemical weathering (d) transfer and deposit of crumbs

**51** Nile River Delta in Egypt is formed due to ..... process.  
 (a) chemical weathering (b) erosion (c) mechanical weathering (d) deposition



**52** Pulling sand away from beaches by sea waves, is considered as an example of.....

**a** mechanical weathering. **b** chemical weathering **c** erosion **d** deposition

**53** When a river meets a sea or an ocean, a..... is formed.

**a** canyon **b** volcano **c** mountain **d** delta

**54** When water freezes, it expands. This means that .....

**a** it will evaporates **b** its temperature increases. **c** its volume increases **d** its volume decreases.

Pulling down broken weathered rocks at mountainsides occurs by the effect of.....

**55** **a** gentle wind. **b** freezing of water. **c** Earth's gravity. **d** chemical weathering

The dropping of sediments in a new place, is known as.....

**a** weathering **b** deposition. **c** freezing **d** erosion

**56** The breaking of rocks into smaller particles without changing their properties is called.....

**a** mechanical weathering **b** chemical weathering. **c** deposition **d** erosion.

Lichens produce..... on rocks that dissolve minerals found in these rock

**57** **a** oxygen **b** acids **c** water **d** rain

All the following are processes that can change the Earth's surface, except.....

**a** digestion **b** erosion **c** weathering **d** deposition

Limestone caves are formed due to the combination of.....

**59** **a** dissolved minerals. **b** red-colored rusts. **c** living organisms. **d** acid rains.

The formation of canyons takes.....

**60** **a** few minutes. **b** few hours. **c** few days **d** many years

When a river that carries sediments meet a sea, ..... is formed.

**a** a layer of sedimentary rock **b** a triangle-shaped delta **c** a small sand dune **d** a large sand dune

**61** Moving of sediments from a place to another represents.....process.

**a** weathering **b** photosynthesis **c** erosion **d** deposition

**62** A great sea covers north of Egypt since millions of years" is evidence of the presence of.....

**a** formation of the clay forming Nile River Delta in Egypt. **b** rock formation of Wadi Al-Hitan. **c** Formation of the coloured valleys in Sinai. **d** formation of the Nile valley in Egypt.



**63** Which of the following accurately indicates the erosion process?

(a) Sands carve rocks changing them into new shapes.  
(b) Sand dunes form a barrier to the wind.  
(c) Water can't move big rocks.  
(d) Accumulate of Earth's materials due to erosion factors.

**64** Most valleys are formed due to.....

(a) water deposition of many sediments and transferring them far away.  
(b) chemical weathering of steep surfaces.  
(c) water erosion of many sediments and transferring them far away.  
(d) accumulation of clay in area where flowing water meets stable water.

**65** Steep valleys formed due to following water erosion are called.....

(a) canyons (b) sand dunes. (c) hills (d) delta

**66** The formation of sand dunes in Eastern Desert in Egypt is due to the movement of.....

(a) floods (b) winds (c) waves (d) torrents

**67** A triangular landform formed from very fine bits of sand and clay that formed due to flow of river into the sea is a.....

(a) canyon (b) delta (c) sand dunes (d) valley

The oldest rocks layers in formation in Wadi Al-Hitan include.....

**68**

(a) Nile River Delta (b) turtle's fossils. (c) layers comprises animals' caves. (d) clay and sediment from soil layers.

**69** Which of the following geological landforms are formed due to deposition process?

(a) Wadi Al-Hitan and colored canyons.  
(b) Wadi Al-Hitan and Nile River Delta.  
(c) Sand dunes and colored canyons.  
(d) Nile River Delta and colored canyon.

**70** At the convergence of flowing river water that carries sediments with the sea, landform which is called ..... is formed.

(a) delta (b) sand dunes (c) dams (d) canyons

**71** Most canyons are formed due to erosion. What the first step of forming canyons?

(a) Water must move over rock formation that has cracked areas allowing rock to erode.  
(b) The land must lie in an area with excess water, beside humidity for breaking down the rocks.  
(c) Water must freeze in the cracks of the rock for eroding the rocks.  
(d) A crack must be formed in earth's crust to allow water to follow through.

**72** Which of the following landforms is steep and formed due to power of flowing water erosion?

(a) Plains (b) Valleys (c) Canyons (d) Mountains

**73** The presence of sand dunes or the deposits in a region, tells us that they are.....

(a) Eroded in their place. (b) weathered in their place. (c) eroded in another place. (d) weathered and eroded in their place.



**74** The shape of the valley depends upon all of the following factors, except.....

(a) type of rocks. (b) speed of the river. (c) size of rocks. (d) size of the river.

**75** A canyon may be formed due to the effect of.....

(a) erosion and deposition. (b) weathering and erosion. (c) weathering and deposition. (d) deposition only.

**76** The main difference between valleys and canyons is that valleys have.....

(a) are very high. (b) steep slope walls. (c) have great depth. (d) vertical walls.

**77** The rainwater gathers in small streams due to the..... downhill.

(a) pushing force of gravity (b) pulling force of gravity  
(c) pushing force of friction (d) pulling force of friction

**78** A canyon can be formed by the effect of.....

(a) water only. (b) wind only. (c) water and wind. (d) water and sunlight.

**79** When a rock blocks the path of flying sand, a..... may be formed.

(a) dune (b) river (c) valley (d) canyon

**80** A canyon may take ..... of years to be formed.

(a) hundreds (b) tens (c) millions (d) couple

**81** If the rain falls over a small canyon for several times per year, .....

(a) its depth increases (b) its depth decreases. (c) it becomes flat (d) it is not be affected

**82** When the force of wind blowing....., the sand travels for a longer distance.

(a) decreases (b) becomes zero (c) doesn't change (d) increases

**83** Geologists are scientists who study.....

(a) plants (b) animals (c) human body. (d) rocks

**84** Deltas are formed when the speed of river water.....

(a) increases (b) decreases (c) doesn't change. (d) become faster.

**85** .....can erode valleys and form canyons across them.

(a) Rivers (b) Mountains (c) Dunes (d) Rocks

**86** The large skeletons of whales that are present in Wadi Al-Hitan considered as an example of.....

(a) fossils (b) rocks (c) sediments (d) formations

**87** When the water of a river travels downhill on a steep slope, its speed.....

(a) stays constant (b) decreases to half. (c) decreases to quarter. (d) increases

**88** The process of carving the rock into different shapes by wind blowing is.....

(a) deposition (b) erosion (c) transportation. (d) weathering



## QUESTION 02

## Complete using words between brackets

- 1 When you turn on a light bulb, the electrical energy travels through ..... until reaching the bulb. (Plastic – wires)
- 2 The produced ..... energy doesn't help the blender do its job. (sound - kinetic)
- 3 When a piece of coal is burnt, ..... Energy is produced. (Potential - thermal)
- 4 To keep playing with the toy car, we have to ..... the batteries. (replace- heat)
- 5 ..... is considered as the main resource of energy on Earth's surface. (The sun - Natural gas)
- 6 The power source for the electric fan is ..... (wind- electricity)
- 7 The output of solar panels is ..... (light – electricity)
- 8 The electric heater transforms ..... energy into heat energy (radio – electric)
- 9 While playing guitar, the .... energy changes into sound energy (potential - kinetic)

## QUESTION 03

## Put (✓) or (✗) or the following statements:

- 1 Mars is located a few meters away from Earth ( )
- 2 The energy chain of a burning candle is: chemical energy converted into thermal energy & light energy ( )
- 3 Mars Curiosity can be operated from a distance ( )
- 4 There is a stored chemical energy inside the food we eat. ( )
- 5 The power source for the electric fan is wind ( )
- 6 Plants need sunlight to grow. ( )
- 7 There is energy loss when energy is transformed from one form to another. ( )
- 8 Both electric bulb and electric heater produce thermal energy ( )
- 9 When pedalling a bike, the chemical energy in your body changes to kinetic energy. ( )
- 10 Energy cannot be transformed from one form to another. ( )
- 11 The produced sound energy helps the hair dryer to do its function. ( )
- 12 We cannot create a new form of energy, and also, we cannot destroy an existed form of energy ( )



**13** Curiosity is a robotic vehicle that is designed to explore the surface of moon ( )

**14** The power source for the solar panel is electricity ( )

**15** The energy produced when operating the gas oven is electrical energy ( )

**16** As the speed of the car increases, the amount of used fuel decreases ( )

**17** Next Concept Biofuel is one of non-renewable resources of energy. ( )

**18** The sun is the primary source of forming both biofuel and fossil fuel. ( )

**19** The movement of a generator in electric power station produces potential energy ( )

**20** Wind energy will run out faster than natural gas ( )

**21** Natural gas is a form of fuels that can be used in generating electrical energy ( )

**22** We can make a liquid fuel from grass and wood chips ( )

**23** Turning off lights that we do not need is a way to conserve electricity ( )

**24** Both coal and wood produce energy when they are burned ( )

**25** Oil, natural gas and coal can be used to produce hydroelectric energy. ( )

**26** Turning off lights that we do not need, is a way to conserve electricity. ( )

**27** Burning of fossil fuel inside electric power station produces potential energy ( )

**28** We can make liquid biofuel from wood chips and grass ( )

**29** Windmills can do their job all the time as the wind never stops blowing. ( )

**30** Next Concept Both modern wind turbines and old windmills are used to generate electricity ( )

**31** Looking directly at the sun is very dangerous. ( )

**32** The flow of water can be controlled to generate electricity in dams ( )

**33** Turbines convert kinetic energy into electrical energy ( )

**34** Plants need sunlight to grow. ( )

**35** We use solar energy to preserve food. ( )

**36** Electricity generated from water is called hydroelectricity. ( )

**37** Water is one of the sources of electricity production in Egypt ( )



38 The electricity produced by water is known as electromagnetic energy. ( )

39 All physical factors of mechanical weathering lead to breaking down of rocks ( )

40 Next Concept Nile delta is a triangle-shaped mass of mud and other sediments. ( )

41 Blowing of wind and flooding of water play an important role in erosion process. ( )

42 When water freezes, its volume decreases. ( )

43 Sedimentary rocks are formed in a short period of time ( )

44 The surface of the Earth changes from time to time. ( )

45 When iron in rocks rusts, the rock becomes more stronger. ( )

46 Wind can be considered one of the factors that cause weathering ( )

47 Sea waves may cause erosion of beaches. ( )

48 Limestone caves are formed by the action of mechanical weathering. ( )

49 Strong wind and hurricanes carry sand grains for a short distance ( )

50 There are many types of sediments like sand, rocks and soil. ( )

51 Nile River Delta has a rectangular shape. ( )

52 A canyon may be formed due to the effect of wind weathering and erosion ( )

53 Sand dunes are the landform that can be seen in both beach and sandy desert. ( )

54 The river movement can take the rocks away around mountains ( )

55 Both canyons and valleys often have river in their bottom. ( )

56 The separated layers of sedimentary rocks are called sediments ( )

57 Wadi Rum in Jordan is an example of dune. ( )

58 Wind cannot break down rocks. ( )

59 Next Concept The Grand Canyon in USA is very large and steep. ( )

60 Sand travels for a short distance when wind blows with a great force. ( )

61 A canyon is formed due to the effect of water stream on a flat land. ( )

62 Wadi Al-Hitan has always looked as it does now ( )

63 Rivers cause less erosion of rocks than small streams. ( )

64 Sand dunes are formed by erosion only. ( )



65 Deltas are formed as a result of deposition ( )

66 A canyon may take one year only to be formed. ( )

67 The Grand Canyon took short period of time to be formed. ( )

68 Wadi Al-Hitan is called by this name due to the presence of fossils of large skeletons of whales. ( )

69 Canyon is a type of dunes which has steep sides ( )

70 Wind can pick up sand grains in forming sand dunes. ( )

71 At Wadi Al-Hitan, the oldest rocks are found at the top of the layers ( )

72 The Nile River pour its water in the Red Sea. ( )

## QUESTION 04

## Complete the following sentences

- 1 The energy can be ..... from one form to another.
- 2 In any energy chain, some of the energy is lost in the form of .....
- 3 The electric lamp converts ..... energy into light and heat energy.
- 4 The mobile phone converts chemical energy stored in its batteries into ..... energy and ..... energy.
- 5 When you ride a bicycle, the ..... energy stored in your body is converted into ..... energy which causes the bicycle to move.
- 6 On Mars planet, Curiosity robot can be operated by using ..... energy from sunlight that is converted into ..... energy used to recharge its batteries.
- 7 To operate an electrical mixer, we use ..... energy
- 8 ..... is burned in a power plant to produce thermal energy that used to generate electrical energy
- 9 Coal and ..... can be used in electric power stations to generate electricity.
- 10 We can use some forms of fuel such as ..... and ..... in warming houses.
- 11 Turbines in electric power stations are turned by steam and they produce ..... energy to run the ..... of the electric power stations.
- 12 The electric generator changes ..... energy into ..... energy
- 13 Gasoline is burned inside a car engine to produce ..... energy.
- 14 Wood chips and grass can be used to make a ..... biofuel.
- 15 To avoid air pollution, we must use ..... resources of energy such as water.

Next Concept



**16** We can use solar energy in cooking by using curved mirror which collect and focus ..... onto metal pots to heat them.

**17** When the wind turbines rotate ..... energy is converted into ..... energy.

**18** Renewable energy resources include ..... and sun

**19** Both wind and water movement produce ..... energy that is used to rotate turbines to generate ..... energy

**20** When we expose our bodies to the sun, we feel .....

## QUESTION 05

## Write the scientific term

**1** A robot vehicle that can be controlled from a distance and is used to explore the surface of mars ( )

**2** The form of energy that is stored in battery of a remote-control toy cars. ( )

**3** The wasted energy of a computer. ( )

**4** The energy produced from playing the guitar. ( )

**5** The energy produced from a battery. ( )

**6** A device used to convert electrical energy into light energy. ( )

**7** Energy that always produced due to friction ( )

**8** Energy can neither be created nor destroyed, but only converted from one form to another. ( )

**9** A kind of energy that is produced from the electrical heater and burning coal ( )

**10** The main sources of energy for most forms of energies on Earth. ( )

**11** A panel designed to absorb the sun energy to produce heat or generate electricity. ( )

**12** The energy that is produced from the blender and helps it in doing its job. ( )

**13** Next Concept A liquid that stores the chemical energy and it is extracted from the fuel to move the car. ( )

**14** It is any substances which produces thermal energy on burning. ( )

**15** Natural resources of energy that takes a very long period of time to be formed. ( )

**16** It is a type of fossil fuel that is produced from dead marine animals. ( )



17 It is a form of biofuel, which can be made from some types of plants such as grass and wood chips ( )

18 It is the main source of most forms of energy on the Earth's surface. ( )

19 The energy produced when the wood of trees is burned. ( )

20 They are fuels that are produced from remains of dead animals and plants under the Earth's surface. ( )

21 It is the system that its tissue is damaged due to breathing big amount of cars smog. ( )

22 It is a type of fossil fuel that is produced from remains of dead plants under the effect of extreme heat and pressure. ( )

23 It is a type of fossil fuel that is produced from dead marine animals. ( )

24 The device in the electric power station, that turns kinetic energy into electrical energy. ( )

25 The increase of Earth's temperature, as a result of burning fossil fuels. ( )

26 **Next Concept** The energy resources that include wind energy and water energy. ( )

27 A turbine in which the kinetic energy of moving water is used to generate hydroelectric energy. ( )

28 Natural resources of energy, that take a short period of time to be renewed. ( )

29 An energy that is generated from windmills and is transmitted through wires to houses and factors. ( )

30 A process in which water changes into water vapor ( )

31 A type of electrical energy generated by water turbines in dams. ( )

32 Type of mirror that used to collect and focus sunlight onto metal pots to heat them and cook food inside ( )

33 A build on the river that controls the flow of water and increases the potential energy of water. ( )

34 A turbine that converts the energy of falling water into electrical energy ( )

35 The process in which the water of rivers evaporates, then condenses forming clouds and turn back to rivers through rainfalls ( )

36 **Next Concept** Process in which rocks are broken down into smaller particles. ( )



**37** It is a type of weathering through which acids of lichens dissolve minerals of rocks. ( )

**38** It is the breaking down of rocks due to the effect of rocks due to the effect of physical factors like wind, water, plant roots and temperature. ( )

**39** Process in which small broken rocks move from a place to another by the help of wind or water. ( )

**40** The disappearance of a sandcastle as a result of its hitting with the sea waves. ( )

**41** Process in which the sediments are dropped in a new location by the action of wind, water and gravity. ( )

**42** It is a process through which water forming ice in cracks of rocks. ( )

**43** They are deep valleys carved by flowing water. ( )

**44** A fan-shaped (triangular) mass of sediment that is formed where a river enters a larger body of water like seas. ( )

**45** They are small solid materials such as sand, soil and small rocks that carried by water to another place. ( )

**46** A hill of sand created by the wind. ( )

**47** Part of plant grows inside cracks of rocks causing its weathering. ( )

**48** A gas in air combines with iron of some rocks and causes its weakness. ( )

**49** The force that pulls down broken weathered rocks at mountain sides. ( )

**50** They are tiny, like plants, live on rocks and produce acid as they grow. ( )

**51** They are lowland areas in between mountains and have gently sloped sides around rivers. ( )

**52** It is a special type of valleys which its sides are steep. ( )

**53** It is the landform that is formed by the effect of weathering and erosion due to wind, water or other factors. ( )

**54** It is a very large and steep canyon which is found in United States of America. ( )

**55** It is the process by which the wind carves the rocks into different shapes. ( )

Next Concept



56 They are scientists who study rocks. ( )

57 A land area that is formed by deposition process when a river enters a lake or a sea ( )

58 It is the landform that is formed by erosion and deposition of sand in sandy desert environment ( )

59 The two processes that have the main role in the formation of canyon. ( )

## QUESTION 06

Give reason..... ?

1 A toy car needs battery to move.  
.....

2 Sound energy of hair dryer considered as wasted energy  
.....

3 When we use soap dispenser some energy change happens  
.....

4 Mars rover Curiosity was operated for long period of time on Mars without any need to be recharged.  
.....

5 There is a change of energy when burning wood.  
.....

6 When you rub your hands, you feel warm.  
.....

7 Thermal energy of mobile considered as wasted energy  
.....

8 Not all the energy that enters the energy chain reaches the device completely.  
.....

Next Concept

9 Gasoline is burned inside a car engine  
.....

10 Wind considered as renewable resources of energy  
.....



**11** Coal considered as non-renewable resources of energy

---

**12** Smog of cars are very dangerous to human health.

---

**13** Fossil fuels cannot be replaced as quickly as they are used

---

**14** Generator are important in electric power stations

---

**15** The fuel is very important for different means of transportation.

---

**16** Using wood as a fuel has negative effects on the environment

---

**17** Farmers must decrease the use of pesticides

---

**18** We must turn off lights that we are do not need

---

**19** We feel warm at night when sun is not visible in the sky

---

**20** Dams are built on rivers

---

**21** Humans used windmills and watermills from hundreds of years ago

---

**22** Kinetic energy of wind affects the speed of wind turbine blades rotation

---

**23** Water turbines are placed in waterfalls areas

---

**24** Rusting of iron of some rocks

---



**25** Erosion and deposition are linked processes.

**26** Water play an important role in the formation of limestone caves.

**27** The Earth's surface is always changing

**28** Lichens cause breaking down rocks

**29** Plant roots play important role in mechanical weathering.

**30** Plants of wetland areas help in formation of deltas.

**31** The oldest rock layers of Wadi Al-Hitan contain fossils of whales.

**32** Trees and other plants are growing on both sides of small canyons.

**33** Geologists study the layers of sediment in rock formations.

**34** Geologists study the layers of rocks in the canyon walls.

**QUESTION 07****What happened if .... ?**

**1** Your hand is approached to lighting electric lamp.

**2** You turn on radio ( according to the change of energy)

**3** You turn on electric iron

**4** You turn on television



5 You use mobile phone for long time (according to wasted energy)

6 Battery of toy car run out

7 You turn on an electric fan

8 The change of energy when you burn a piece of wood

9 Solar panels exposed to sun light

10 The remains of marine were buried under the Earth's surface over millions of years.

11 people increase using wood a fuel

12 Decomposition of remains of sea animals under the Earth's surface

13 The car fuel indicator if the amount of gasoline in a car decrease

14 The car fuel run out

15 Water of sea evaporates up to sky

16 Dams are built on rivers

17 Wind doesn't blow in an area that contains many modern wind turbines

18 The kinetic energy of a wind that is applied on the wind turbine increases

19 Sunlight falls on solar panels

20 Growing of Lichens on rocks



21 Formation of rust on some rocks

22 To the shape of canyon after many years

23 Sea waves hit sandcastle

24 Acid rain falls on rocks

25 Plant roots grow inside the crack of rocks

26 The layers of sedimentary rocks press down over long periods of time

Next concept

27 A flat land, if a water stream flows over it.

28 A river stream enters a sea.

29 A river erodes the sediments of a mountain over a long period of time.

### QUESTION 08

### cross the odd word

1 Food – Battery – Lamp – coal

2 weathering – deposition – evaporation-erosion

3 Electric heater – electric iron – washing machine – hair drier

4 water – wind – coal – sun

5 Hand mixer – electric heater – hand bell – drum

6 Gasoline – coal –wind - natural gas

7 acid rain – lichens – oxygen – plant root  
(According to type of weathering)



## QUESTION 09

## Match

1

( A )		( B )	
1	Energy	a	solar energy
2	Solar heaters	b	it does not destroy, but transforms from one form to another
3	Solar panel input	c	It is used to heat water using the energy of the sun
		d	It is used to convert thermal energy into electrical energy

2

( A )		( B )	
1	The sun	a	It is operated by electricity.
2	Benzene	b	Its light energy changes into chemical energy in plants.
3	The fan	c	It is a liquid that can be used as a fuel for cars.

3

( A )		( B )	
1	Coal	a	Solar energy
2	Water	b	Non-renewable energy source
3	Wind turbine output	c	Electrical energy
		d	Renewable energy source

4

( A )		( B )	
1	Solar panels	a	use in cooking food by converting solar energy into heat energy.
2	Curved mirrors	b	It was used to grind grain.
3	Windmills	c	use to generate electricity from solar energy
		d	Convert kinetic energy into electrical energy.



5

( A )		( B )	
1	Turbines	a	It was used to grind grain
2	Greenhouse	b	Convert kinetic energy into electrical energy
3	Windmills	c	It helps to grow crops that only grow in warm climates
		d	Non-renewable energy source

6

( A )		( B )	
1	The sun	a	from non-renewable energy sources.
2	Coal	b	From Factors affecting the formation of fossil fuels
3	Pressure and temperature	c	The main energy source on the Earth's surface.
		d	Converting wind energy into electrical energy

7

( A )		( B )	
1	Natural gas	a	Convert kinetic wind energy into electricity
2	Wind turbines	b	The main source of energy on the Earth's surface
3	Law of conservation of energy	c	A non-renewable energy source
		d	Energy does not destroy, but transforms from one form to another

8

( A )		( B )	
1	Fossil fuels	a	One of the ways to conserve fossil fuels
2	Solar Panels	b	A non-renewable energy source.
3	Turn off appliances and lights when being outside the home	c	Converting solar energy into electricity.
		d	Source of renewable energy.



9

( A )		( B )	
1	sand dunes	a	A fan-shaped mass of sediment that is formed where a river enters a larger body of water like seas.
2	canyon	b	They are deep valleys carved by flowing water.
3	Delta	c	it is the land form by erosion and deposition of sand in sandy desert environment

10

( A )		( B )	
1	Deposition	a	It is a type of weathering through which acids of lichens dissolve minerals of rocks.
2	Chemical weathering	b	it is the breaking down of rocks due to the effect of rocks due to the effect of physical factors like wind, water, plant roots and temperature
3	Mechanical weathering	c	Process in which the sediments are dropped in a new location by the action of wind, water and gravity.

## QUESTION 10

## Correct the underlined words

1 Most of energy chains start with the moon. ( )

2 We use thermal energy used to play a drum ( )

3 To operate an electric mixer, we use sound energy ( )

4 There is a stored thermal energy inside the food we eat ( )

5 Mars rover curiosity used to explore Earth planet ( )

6 Wood is a form of fossil fuel, that can be used in houses. ( )

7 In electric power station, wind turns turbines that produce kinetic energy. ( )

8 Fuel is the substance that produces electrical energy on burning ( )

9 Generator in the electric power station changes potential energy into electrical energy ( )

10 Fossil fuel include oil, coal and wood. ( )

11 Water can be used to generate solar energy ( )

12 The moon is the primary source of both biofuel and fossil fuel ( )

13 Rivers store kinetic energy ( )

14 Water turbine rotate when their blades rotate as wind blow ( )





15 Electricity generated by wind turbines is transmitted through wind ( )

16 Thermal energy and sound energy are produced from the Sun and reach the Earth ( )

17 Dams are built on rivers to generate sound energy ( )

18 Next Concept The movement of sediments from one place to another is known as weathering. ( )

19 Shaping the Earth is usually start by deposition process. ( )

20 Oxygen in air reacts with iron of some rocks forming green-colored rust ( )

21 When water freezes, its volume decreases ( )

22 Carbon dioxide in the air always causes rust on rocks ( )

23 Deltas are formed by weathering process. ( )

24 Dunes are lowland areas which have gently sloped sides ( )

## QUESTION 11

complete using the words

1

(Canyon – delta – chemical – mechanical)

1 In .....weathering the structure of rocks changes due to chemical reactions.

2 In the .....weathering, the chemical structure of rocks doesn't change.

3 A .....is formed where rivers meet a sea.

4 .....is a deep valley carved by flowing water.

2

(Wind – sedimentary rocks – sand grains )

1 Blowing of strong .....in the desert may form large sand dunes.

2 When layers of sediments mixed with mud and remains of plants and animals and over time these layers pressed down forming .....

3 Strong wind and hurricanes carry .....for a long distance.

3

(input – Dam – output -concave mirrors – electric )

1 In electric heater electric energy is considered as an .....energy .....used to control the flow of water and increases the potential energy of water to generate electricity .

2 .....used to collect and focus sun rays to heat metal pots and cook food



## QUESTION 12

## Answer the following questions

1

Rearrange the following steps to describe how coal is formed.

- a** The earth surface plants get old and died.
- b** The remains of the plants were decomposed and covered with sand clay layers
- c** Anciently, earth was covered with swamps where plants grow.
- d** Several layers of clays and sands were deposited on the remains of died plants.
- e** The buried plants were changed into coal due to the effect of heat and pressure.

2

Rearrange the following steps to describe processes that cause Earth's surface changes :

( Erosion- Weathering -Deposition)

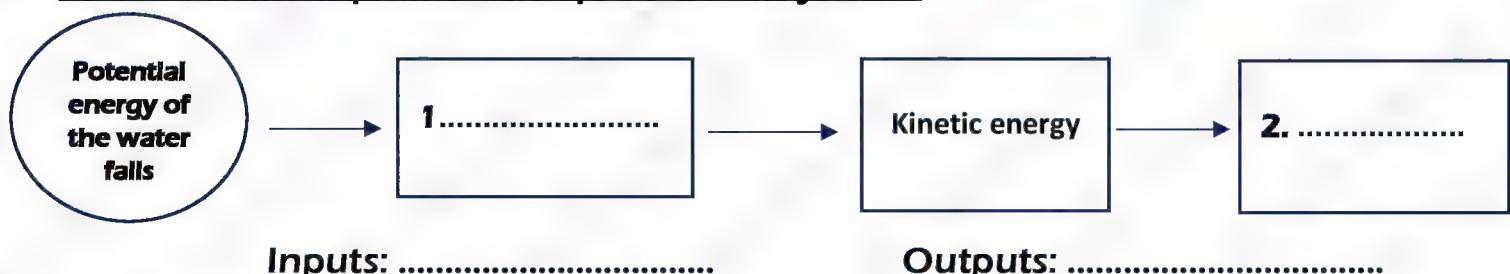
3

Complete the following model:



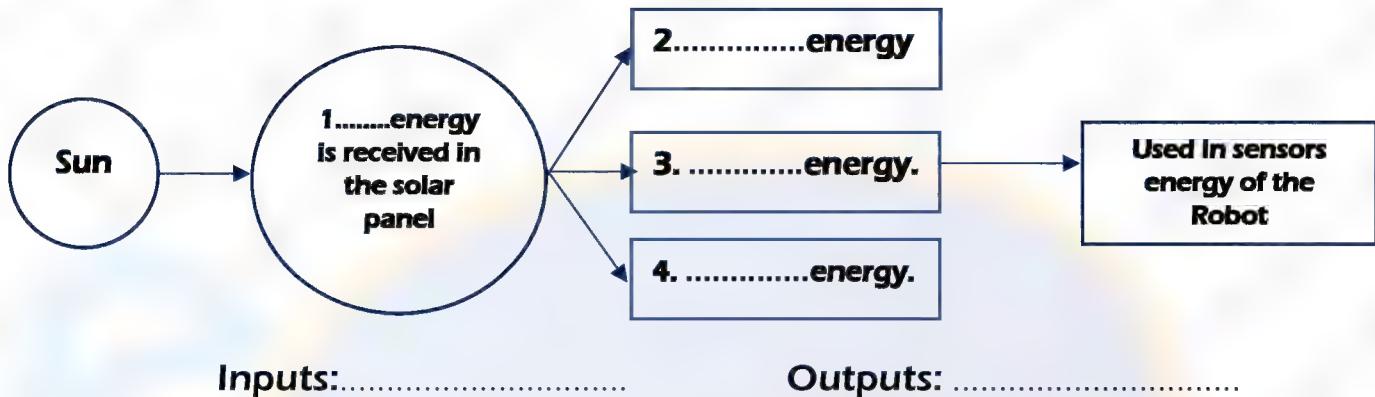
4

Complete the following model to describe the hydroelectric energy, and then determine the inputs and outputs of this system?



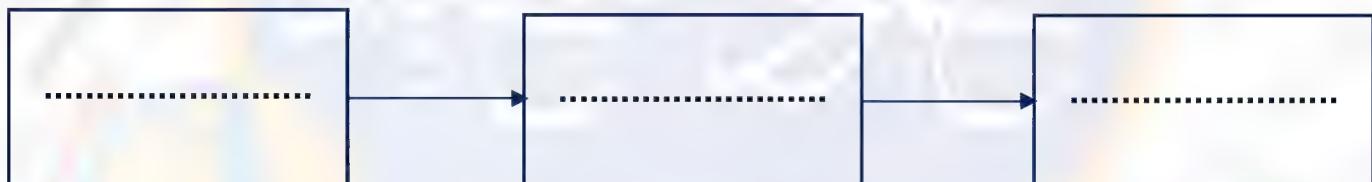
5

**Complete the following model to describe the energy transformations in the Mars exploration vehicle, and determine the inputs and outputs of this system?**



6

**Draw a model showing the energy chain system when using solar panels to light the roads. Define the input and output energies.**



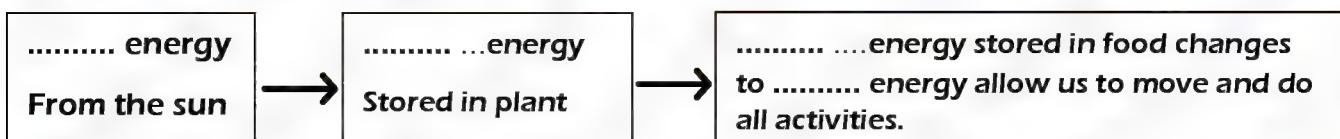
**a** System inputs: .....

**b** System outputs: .....

**c** What are the conversions of energy in this system?

7

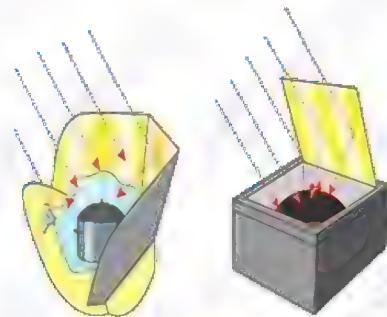
**Complete the following energy chain:**



8

The following figure represents a solar oven:

- a** What is the type of mirrors that used in this device?
- b** What is the importance of this device?



The following figure represents a solar heater

- a** The input energy is .....
- b** The output energy is .....



10

Study the opposite figure then complete the following sentences:

- a** This figure represents .....
- b** It controls flow of water and increases the ..... energy of water
- c** When water fall water turbines rotate, it generates .....



11

Study the opposite figures then complete the following:



Fig (1)



Fig (2)

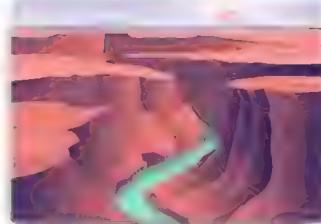


Fig (3)

- a** Figure ( ..... ) and ( ..... ) changes very slowly while figure ( ..... ) changes very quickly.
- b** After some hours, figure (.....) disappears completely.

12

- a** This figure represents ..... that formed in ..... of years ..... and ..... processes help in the formation of it.



13

Study the opposite figures then complete the following:



Fig (1)

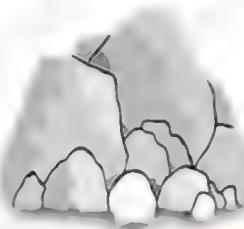


Fig (2)



Fig (3)



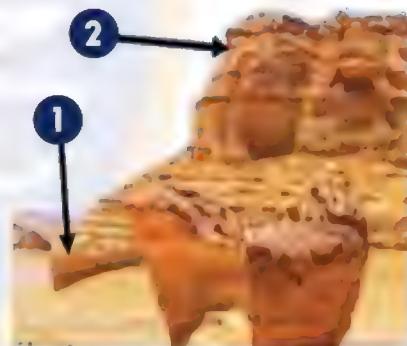
Fig (4)

- a** Figure (.....) represents living organism cause mechanical weathering.
- b** Figure (.....) represents living organism cause chemical weathering.
- c** Oxygen gas has a bad effect on rocks in figure (.....)
- d** Oxygen gas has a bad effect on rocks in figure (.....)

14

Study the opposite figures then complete the following:

- a** This place contained a (river- sea) in the past.
- b** The oldest rocks are found in number (1-2)
- c** Fossils of turtles exist in (1-2)



**انتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق**



الصف  
الرابع  
الابتدائي  
٢٠٢٣

بنك أسئلة

أ/ محمود سعيد



Model Answers

# SCIENCE

SECOND TERM FINAL REVISION

By

MRS . Amira ahmed

cartoon science



El.Motamyez.School

يمكنكم الحصول على المذكرات والاختبارات من خلال مسح رمز QR  
أو من خلال صنفحة "المتميز - أ/ محمود سعيد".  
يرجى مراعاة حقوق صاحب المحتوى عند النشر



# EL MOTAMYEZ - SCIENCE Questions Bank

## FINAL REVISION

### QUESTION 01

### Choose The Correct Answer

- 1 The unusable energy that produced from the electric lamp .....
  - (a) potential energy
  - (b) chemical energy
  - (c) **thermal energy**
  - (d) light energy
- 2 The input energy used to control the Mars exploration vehicle is .....
  - (a) **electric energy**
  - (b) light energy
  - (c) kinetic energy
  - (d) mechanical energy
- 3 The produced energy from radio that reflects its main function is .....
  - (a) electric energy
  - (b) **sound energy**
  - (c) light energy
  - (d) chemical energy
- 4 Energy is the ability to do work. Which of the following is considered energy?
  - (a) air
  - (b) car
  - (c) water
  - (d) **electricity**
- 5 The input energy when using the hair dryer is the ..... energy
  - (a) **electrical**
  - (b) potential
  - (c) kinetic
  - (d) thermal
- 6 Some energy is lost in most devices in the form of ..... energy.
  - (a) electric
  - (b) **thermal**
  - (c) sound
  - (d) kinetic
- 7 Electric wires are made up of ..... material.
  - (a) plastic
  - (b) aluminum
  - (c) iron
  - (d) **copper**
- 8 During riding a bike, some kinetic energy is converted into ..... energy due to friction of bike's tire with the road
  - (a) chemical
  - (b) potential
  - (c) **thermal**
  - (d) electrical
- 9 A plugged-in lamp can turn ..... energy to ..... energy.
  - (a) **electrical, light**
  - (b) kinetic, light
  - (c) chemical, light
  - (d) chemical, heat
- 10 As energy transforms from one form to another, some of it is often lost as.....
  - (a) light
  - (b) **heat**
  - (c) sound
  - (d) movement
- 11 Some electric devices need ..... energy to be recharged
  - (a) **electrical**
  - (b) thermal
  - (c) potential
  - (d) sound
- 12 Spacecraft takes several ..... to reach Mars planet
  - (a) days
  - (b) years
  - (c) **months**
  - (d) minutes
- 13 Energy doesn't destroy, nor create from nothing, this indicates .....
  - (a) the draining of energy resources
  - (b) **conservation and transformation of energy**
  - (c) resources of energy are numerous
  - (d) destroying the energy resources





14 The idea of design and work of the robot that explores the surface of Mars depends on the idea of transforming .....

(a) electric to kinetic energy      (b) potential to kinetic energy  
 (c) **light to electric energy**      (d) kinetic to electric energy

15 In our daily life we use devices which depend on energy forms.

Which of the following uses is true?

(a) computer depends on kinetic and electric energy      (b) **ceiling fan depends on electric energy**  
 (c) the function of television depends on the hydroelectric energy      (d) cell phones depend on potential and kinetic energy for operation

16 In a battery of a toy car ..... energy changes into electrical energy.

(a) **chemical**      (b) sound      (c) thermal      (d) kinetic

17 Curiosity rover is designed to explore .....

(a) **Mars planet**      (b) the Moon      (c) the sun      (d) Earth planet

18 When you use the hand bell, the .... energy changed into sound energy

(a) Electrical      (b) potential      (c) thermal      (d) **kinetic**

19 Both hair dryer and electric water kettle produce ..... energy.

(a) **thermal**      (b) light      (c) electric      (d) potential

20 We can use the energy obtained from burning of wood in all of the following, except.....

(a) warming houses      (b) **operating television.**      (c) cooking food      (d) boiling water.

21 .....is considered as the main resource of energy on the Earth's surface.

(a) Gasoline      (b) **The Sun**      (c) Natural gas      (d) The moon

22 All the following are renewable resources of energy, except.....

(a) **natural gas**      (b) water      (c) the Sun      (d) wind.

23 All the following are forms of fossil fuel, except.....

(a) **water**      (b) coal      (c) natural gas      (d) oil

24 Non-renewable energy resources, take.....

(a) a short period of time      (b) **a very long period of time**      (c) few minutes      (d) few hours

25 All the following are found deeply under the Earth's surface, except .....

(a) coal      (b) natural gas      (c) **green plant**      (d) oil

26 Smog causes irritation of ..... of humans

(a) stomach and eyes      (b) **eyes and lungs**      (c) small intestine      (d) large intestine

27 Wood is considered as.....

(a) **biofuel**      (b) fossil fuel.      (c) liquid fuel      (d) gaseous fuel.



**28** All the following are used to generate electrical energy, except.....  
 (a) oil (b) natural gas. (c) waterfalls (d) rain water

**29** Coal is formed under the Earth's surface from the remains of.....  
 (a) dead animals (b) dead plants. (c) dead humans. (d) dead insects.

**30** Extreme heat and pressure under the Earth's surface has an important role in forming.....  
 (a) wood (b) wind (c) fossil fuel (d) biofuel.

**31** Which of the following energy forms isn't produced from the Sun?  
 (a) Thermal energy. (b) Light energy. (c) Kinetic energy (d) Radiation energy.

**32** Which of the following is a preferred natural resource to generate clean energy?  
 (a) Ocean and river water (b) Trees and dry herbs. (c) Water, coal, and oil. (d) Wind, oil, and natural gas.

**33** The resource that we consume in a rate faster than its formation in nature.....  
 (a) Wind. (b) Water. (c) Solar energy. (d) Fossil fuel.

**34** ..... is a renewable source of energy  
 (a) Coal (b) Natural gases (c) Water (d) Fossil fuel

**35** The cause of preferring the use of wind and solar energies instead of coal and oil in producing energy is.....  
 (a) Wind and solar energies are non-renewable energies opposite to coal and oil.  
 (b) Using wind and solar energies is less expensive than coal and oil.  
 (c) Wind and solar energies are renewable energies opposite to coal and oil.  
 (d) Wind and solar energies have residues which negatively affect the environment.

**36** We can decrease the consumption of non-renewable sources of energy by using a source of clean energy except for.....  
 (a) energy produced from water turbines.  
 (b) energy produced from windmills.  
 (c) solar panels that exist on the roofs of houses.  
 (d) energy produced from burning benzene and natural gases.

**37** Energy produced from flowing water of waterfalls, dams and turbines is called.....  
 (a) mechanical energy (b) hydroelectric energy (c) chemical energy (d) kinetic energy.

**38** All of the following are examples of renewable energy resources, except.....  
 (a) fossil fuel (b) waterfalls. (c) wind (d) sunlight.

**39** Greenhouses allow farmers to plant crops that only grow in.....  
 (a) polar climate (b) warm climate. (c) absence of sunlight (d) absence of water.





**40** The wind movement has ..... energy which moves the windmill's blades.

(a) kinetic (b) solar (c) thermal (d) potential

**41** When blades of turbine rotate, it generate ..... energy

(a) electrical (b) solar (c) chemical (d) potential

**42** Solar water heater changes ..... energy into ..... energy

(a) electrical – thermal (b) solar – sound (c) electrical – sound (d) solar - thermal

**43** When a rock's surface is eroded due to weather factors such as air or water, this indicates the occurrence of ..... process.

(a) weathering (b) deposition (c) transfer (d) erosion

**44** Dissolving metals forming rocks is an example for .....

(a) mechanical weathering (b) weathering by wind. (c) deposition in rivers. (d) chemical weathering

**45** Which of the following indicates the occurrence of chemical weathering process?

(a) Water freezes and increases in size, helping breaking down the rocks.  
 (b) Mixing the acidic water with rocks, and dissolving parts of them.  
 (c) Trees' roots grow extensively in rocks cracks, leading to their breaking down.  
 (d) Collision of rocks between each other in a fast-flowing water stream.

**46** Which of the following is not an example of erosion?

(a) The river carries the clay deposits to form sedimentary layers.  
 (b) The movement and accumulation of sand grains to form sand barrier.  
 (c) The sea waves transfer sand and soil crumbs from the shore to the sea.  
 (d) The dissolving of minerals in rocks due to water that goes through it.

**47** When rocks break down into small pieces, this indicates the occurrence of ..... process.

(a) mechanical weathering (b) chemical weathering (c) erosion by wind (d) erosion by water

**48** The rapid flow of river water leads to erosion of parts of the river banks. When it slows down, it transfers some sediment to new places, and then ..... process occurs.

(a) deposition (b) erosion (c) weathering (d) transferring

**49** Rush flow of water that carries sands during deposition process leads to.....

(a) chemical weathering of lime rocks.  
 (b) smoothing rough edges of rocks.  
 (c) erosion of sedimentary rocks layers.  
 (d) dissolving metals forming rocks.

**50** Forming red rust in sedimentary rocks is evidence of occurring ..... process.

(a) erosion of sedimentary rocks  
 (b) mechanical weathering  
 (c) chemical weathering  
 (d) transfer and deposit of crumbs

**51** Nile River Delta in Egypt is formed due to ..... process.

(a) chemical weathering (b) erosion (c) mechanical weathering (d) deposition



52 Pulling sand away from beaches by sea waves, is considered as an example of.....

(a) mechanical weathering. (b) chemical weathering (c) **erosion** (d) deposition

53 When a river meets a sea or an ocean, a..... is formed.

(a) canyon (b) volcano (c) mountain (d) **delta**

54 When water freezes, it expands. This means that .....

(a) it will evaporate (b) its temperature increases. (c) **its volume increases** (d) its volume decreases.

Pulling down broken weathered rocks at mountainsides occurs by the effect of.....

55 (a) gentle wind. (b) freezing of water. (c) **Earth's gravity.** (d) chemical weathering

\* The dropping of sediments in a new place, is known as.....

(a) weathering (b) **deposition.** (c) freezing (d) erosion

56 The breaking of rocks into smaller particles without changing their properties is called.....

(a) **mechanical weathering** (b) chemical weathering (c) deposition (d) erosion.

Lichens produce..... on rocks that dissolve minerals found in these rock

57 (a) oxygen (b) **acids** (c) water (d) rain

All the following are processes that can change the Earth's surface, except.....

58 (a) **digestion** (b) erosion (c) weathering (d) deposition

Limestone caves are formed due to the combination of.....

59 (a) **dissolved minerals.** (b) red-colored rusts. (c) living organisms. (d) acid rains.

\*The formation of canyons takes.....

60 (a) few minutes. (b) few hours. (c) few days (d) **many years**

\*When a river that carries sediments meet a sea, ..... is formed.

(a) a layer of sedimentary rock (b) **a triangle-shaped delta** (c) a small sand dune (d) a large sand dune

61 Moving of sediments from a place to another represents.....process.

(a) weathering (b) photosynthesis (c) **erosion** (d) deposition

62 A great sea covers north of Egypt since millions of years" is evidence of the presence of.....

(a) formation of the clay forming Nile River Delta in Egypt. (b) **rock formation of Wadi Al-Hitan.** (c) Formation of the colored valleys in Sinia. (d) **formation of the Nile valley in Egypt.**





63 Which of the following accurately indicates the erosion process ?

- (a) Sands carve rocks changing them into new shapes.
- (c) Water can't move big rocks.
- (b) Sand dunes form a barrier to the wind.
- (d) Accumulate of Earth's materials due to erosion factors.

64 Most valleys are formed due to.....

- (a) water deposition of many sediments and transferring them far away.
- (c) water erosion of many sediments and transferring them far away.
- (b) chemical weathering of steep surfaces.
- (d) accumulation of clay in area where flowing water meets stable water.

65 Steep valleys formed due to following water erosion are called.....

- (a) canyons
- (b) sand dunes.
- (c) hills
- (d) delta

66 The formation of sand dunes in Eastern Desert in Egypt is due to the movement of.....

- (a) floods
- (b) winds
- (c) waves
- (d) torrents

67 A triangular landform formed from very fine bits of sand and clay that formed due to flow of river into the sea is a.....

- (a) canyon
- (b) delta
- (c) sand dunes
- (d) valley

The oldest rocks layers in formation in Wadi Al-Hitan include.....

68 (a) Nile River Delta

(b) turtle's fossils.

(c) layers comprise animals' caves.

(d) clay and sediment from soil layers.

69 Which of the following geological landforms are formed due to deposition process?

- (a) Wadi Al-Hitan and colored canyons.
- (c) Sand dunes and colored canyons.
- (b) Wadi Al-Hitan and Nile River Delta.
- (d) Nile River Delta and colored canyon.

70 At the convergence of flowing river water that carries sediments with the sea, landform which is called ..... is formed.

- (a) delta
- (b) sand dunes
- (c) dams
- (d) canyons

71 Most canyons are formed due to erosion. What the first step of forming canyons?

Water must move over rock formation that has cracked areas allowing rock to erode.

(c) Water must freeze in the cracks of the rock for eroding the rocks.

The land must lie in an area with excess water, beside humidity for breaking down the rocks.

(d) A crack must be formed in earth's crust to allow water to follow through.

72 Which of the following landforms is steep and formed due to power of flowing water erosion?

- (a) Plains
- (b) Valleys

(c) Canyons

(d) Mountains

73 The presence of sand dunes or the deposits in a region, tells us that they are..

- (a) Eroded in their place.
- (b) weathered in their place.

(c) eroded in another place.

(d) weathered and eroded in their place.





**74** The shape of the valley depends upon all of the following factors, except.....

(a) type of rocks. (b) speed of the river. (c) size of rocks. (d) size of the river.

**75** A canyon may be formed due to the effect of.....

(a) erosion and deposition. (b) weathering and erosion. (c) weathering and deposition. (d) deposition only.

**76** The main difference between valleys and canyons is that valleys have.....

(a) are very high. (b) steep slope walls. (c) have great depth. (d) vertical walls.

**77** The rainwater gather in small streams due to the..... downhill.

(a) pushing force of gravity (b) pulling force of gravity (c) pushing force of friction (d) pulling force of friction

**78** A canyon can be formed by the effect of.....

(a) water only. (b) wind only. (c) water and wind. (d) water and sunlight.

**79** When a rock blocks the path of flying sand, a..... may be formed.

(a) dune (b) river (c) valley (d) canyon

**80** A canyon may take ..... of years to be formed.

(a) hundreds (b) tens (c) millions (d) couple

**81** If the rain falls over a small canyon for several times per year, .....

(a) its depth increases (b) its depth decreases. (c) it becomes flat (d) it is not be affected

**82** When the force of wind blowing....., the sand travels for a longer distance.

(a) decreases (b) becomes zero (c) doesn't change (d) increases

**83** Geologists are scientists who study.....

(a) plants (b) animals (c) human body. (d) rocks

**84** Deltas are formed when the speed of river water.....

(a) increases (b) decreases (c) doesn't change. (d) become faster.

**85** .....can erode valleys and form canyons across them.

(a) Rivers (b) Mountains (c) Dunes (d) Rocks

**86** The large skeletons of whales that are present in Wadi Al-Hitan considered as an example of.....

(a) fossils (b) rocks (c) sediments (d) formations

**87** When the water of a river travels downhill on a steep slope, its speed.....

(a) stays constant (b) decreases to half. (c) decreases to quarter. (d) increases

**88** The process of carving the rock into different shapes by wind blowing is.....

(a) deposition (b) erosion (c) transportation. (d) weathering



## QUESTION 02

## Complete using words between brackets

- 1 When you turn on a light bulb, the electrical energy travels through ..... until reaching the bulb. (Plastic – wires)
- 2 The produced ..... energy doesn't help the blender do its job. (sound - kinetic)
- 3 When a piece of coal is burnt, ..... energy is produced. (Potential - thermal)
- 4 To keep playing with the toy car, we have to ..... the batteries. (replace- heat)
- 5 ..... is considered as the main resource of energy on Earth's surface. (The sun - Natural gas)
- 6 The power source for the electric fan is ..... (wind- electricity)
- 7 The output of solar panels is ..... (light – electricity)
- 8 The electric heater transforms ..... energy into heat energy (radio – electric)
- 9 While playing guitar, the .... energy changes into sound energy (potential - kinetic)

## QUESTION 03

## Put (✓) or (✗) or the following statements:

- 1 Mars is located a few meters away from Earth
- 2 The energy chain of a burning candle is: chemical energy converted into thermal energy & light energy
- 3 Mars Curiosity can be operated from a distance
- 4 There is a stored chemical energy inside the food we eat.
- 5 The power source for the electric fan is wind
- 6 Plants need sunlight to grow.
- 7 There is energy loss when energy is transformed from one form to another.
- 8 Both electric bulb and electric heater produce thermal energy
- 9 When pedalling a bike, the chemical energy in your body changes to kinetic energy .
- 10 Energy cannot be transformed from one form to another.
- 11 The produced sound energy helps the hair dryer to do its function.
- 12 We cannot create a new form of energy, and also, we cannot destroy an existed form of energy



**13** Curiosity is a robotic vehicle that is designed to explore the surface of moon

**14** The power source for the solar panel is electricity

**15** The energy produced when operating the gas oven is electrical energy

**16** As the speed of the car increases, the amount of used fuel decreases

**17** Next Concept Biofuel is one of non-renewable resources of energy.

**18** The sun is the primary source of forming both biofuel and fossil fuel.

**19** The movement of a generator in electric power station produces potential energy

**20** Wind energy will run out faster than natural gas

**21** Natural gas is a form of fuels that can be used in generating electrical energy

**22** We can make a liquid fuel from grass and wood chips

**23** Turning off lights that we do not need is a way to conserve electricity

**24** Both coal and wood produce energy when they are burned

**25** Oil, natural gas and coal can be used to produce hydroelectric energy.

**26** Turning off lights that we do not need, is a way to conserve electricity.

**27** Burning of fossil fuel inside electric power station produces potential energy

**28** We can make liquid biofuel from wood chips and grass

**29** Next Concept Windmills can do their job all the time as the wind never stops blowing.

**30** Both modern wind turbines and old windmills are used to generate electricity

**31** Looking directly at the sun is very dangerous.

**32** The flow of water can be controlled to generate electricity in dams

**33** Turbines convert kinetic energy into electrical energy

**34** Plants need sunlight to grow.

**35** We use solar energy to preserve food.

**36** Electricity generated from water is called hydroelectricity.

**37** Water is one of the sources of electricity production in Egypt



38 The electricity produced by water is known as electromagnetic energy.

39 All physical factors of mechanical weathering lead to breaking down of rocks

40 Nile delta is a triangle-shaped mass of mud and other sediments.

41 Blowing of wind and flooding of water play an important role in erosion process.

42 When water freezes, its volume decreases.

43 Sedimentary rocks are formed in a short period of time

44 The surface of the Earth changes from time to time.

45 When iron in rocks rusts, the rock becomes more stronger.

46 Wind can be considered one of the factors that cause weathering

47 Sea waves may cause erosion of beaches.

48 Limestone caves are formed by the action of mechanical weathering.

49 Strong wind and hurricanes carry sand grains for a short distance

50 There are many types of sediments like sand, rocks and soil.

51 Nile River Delta has a rectangular shape.

52 A canyon may be formed due to the effect of wind weathering and erosion

53 Sand dunes are the landform that can be seen in both beach and sandy desert.

54 The river movement can take the rocks away around mountains

55 Both canyons and valleys often have river in their bottom.

56 The separated layers of sedimentary rocks are called sediments

57 Wadi Rum in Jordan is an example of dune.

58 Wind cannot break down rocks.

59 The Grand Canyon in USA is very large and steep.

60 Sand travels for a short distance when wind blows with a great force.

61 A canyon is formed due to the effect of water stream on a flat land.

62 Wadi Al-Hitan has always looked as it does now

63 Rivers cause less erosion of rocks than small streams.

64 Sand dunes are formed by erosion only.

Next Concept



65 Deltas are formed as a result of deposition

66 A canyon may take one year only to be formed.

67 The Grand Canyon took short period of time to be formed.

68 Wadi Al-Hitan is called by this name due to the presence of fossils of large skeletons of whales.

69 Canyon is a type of dunes which has steep sides

70 Wind can pick up sand grains in forming sand dunes.

71 At Wadi Al-Hitan, the oldest rocks are found at the top of the layers

72 The Nile River pour its water in the Red Sea.

#### QUESTION 04 Complete the following sentences

1 The energy can be changed from one form to another.

2 In any energy chain, some of the energy is lost in the form of heat.

3 The electric lamp converts electric energy into light and heat energy.

4 The mobile phone converts chemical energy stored in its batteries into light energy and sound energy.

5 \*When you ride a bicycle, the chemical energy stored in your body is converted into kinetic energy which causes the bicycle to move.

6 \*On Mars planet, Curiosity robot can be operated by using solar energy from sunlight that is converted into electric energy used to recharge its batteries.

7 To operate an electrical mixer, we use electric energy

8 \*Coal or natural gas is burned in a power plant to produce thermal energy that is used to generate electrical energy

9 Coal and oil can be used in electric power stations to generate electricity.

10 \*We can use some forms of fuel such as wood and coal in warming houses.

11 Turbines in electric power stations are turned by steam and they produce kinetic energy to run the generator of the electric power stations.

12 The electric generator changes kinetic energy into electric energy

13 Gasoline is burned inside a car engine to produce thermal energy.

14 Wood chips and grass can be used to make a liquid biofuel.

15 \*To avoid air pollution, we must use renewable resources of energy such as water.



16 We can use solar energy in cooking by using curved mirror which collect and focus **sun light** onto metal pots to heat them.

17 When the wind turbines rotate **kinetic** energy is converted into **electric** energy.

18 Renewable energy resources include **wind**, **water** and **sun**

19 Both wind and water movement produce **kinetic** energy that is used to rotate turbines to generate **electric** energy

20 When we expose our bodies to the sun, we feel **warm**.

## QUESTION 05

## Write the scientific term

1 A robot vehicle that can be controlled from a distance and is used to explore the surface of mars **mars rover**  
**curiosity robot**

2 The form of energy that is stored in battery of a remote-control toy cars. **chemical energy**

3 The wasted energy of a computer. **heat**

4 The energy produced from playing the guitar. **sound energy**

5 The energy produced from a battery. **electrical energy**

6 A device used to convert electrical energy into light energy. **(light bulb)**  
**Electric bulb**

7 Energy that always produced due to friction **thermal energy**

8 Energy can neither be created nor destroyed, but only converted from one form to another. **law of conservation of energy**

9 A kind of energy that is produced from the electrical heater and burning coal **thermal energy**

10 The main sources of energy for most forms of energies on Earth. **sun**

11 A panel designed to absorb the sun energy to produce heat or generate electricity. **solar panel**

12 The energy that is produced from the blender and helps it in doing its job. **kinetic energy**

13 A liquid that stores the chemical energy and it is extracted from the fuel to move the car. **gasoline**

14 It is any substances which produces thermal energy on burning. **fuel**

15 Natural resources of energy that takes a very long period of time to be formed. **non-renewable energy resources**

Next Concept



16 \*It is a type of fossil fuel that is produced from dead marine animals. oil – natural gas

17 \*It is a form of biofuel, which can be made from some types of plants such as grass and wood chips liquid fuel

18 \*It is the main source of most forms of energy on the Earth's surface. the sun

19 \*The energy produced when the wood of trees is burned. thermal energy

20 \*They are fuels that are produced from remains of dead animals and plants under the Earth's surface. fossil fuels

21 \*It is the system that its tissue is damaged due to breathing big amount of cars smog. respiratory system

22 \*It is a type of fossil fuel that is produced from remains of dead plants under the effect of extreme heat and pressure. Coal

23 \*It is a type of fossil fuel that is produced from dead marine animals. oil

24 \*The device in the electric power station, that turns kinetic energy into electrical energy. generator

25 \*The increase of Earth's temperature, as a result of burning fossil fuels. Global warming

26 \*The energy resources that include wind energy and water energy. renewable energy resources

27 \*A turbine in which the kinetic energy of moving water is used to generate hydroelectric energy. Water turbine

28 \*Natural resources of energy, that take a short period of time to be renewed. renewable energy resources

29 \*An energy that is generated from windmills and is transmitted through wires to houses and factories. electric energy

30 \*A process in which water changes into water vapor evaporation

31 \*A type of electrical energy generated by water turbines in dams. hydroelectric

32 \*Type of mirror that used to collect and focus sunlight onto metal pots to heat them and cook food inside convergent (concave) mirror

33 \*A build on the river that controls the flow of water and increases the potential energy of water. Dam

34 \*A turbine that converts the energy of falling water into electrical energy water turbine

35 \*The process in which the water of rivers evaporates, then condenses forming clouds and turn back to rivers through rainfalls water cycle



**36** Process in which rocks are broken down into smaller particles. weathering

**37** \*It is a type of weathering through which acids of lichens dissolve minerals of rocks. Chemical weathering

**38** \*It is the breaking down of rocks due to the effect of rocks due to the effect of physical factors like wind, water, plant roots and temperature Mechanical weathering

**39** \*Process in which small broken rocks move from a place to another by the help of wind or water erosion

**40** \*The disappearance of a sandcastle as a result of its hitting with the sea waves Erosion of sand castle

**41** \*Process in which the sediments are dropped in a new location by the action of wind, water and gravity. deposition

**42** \*It is a process through which water forming ice in cracks of rocks. Freezing process

**43** They are deep valleys carved by flowing water. Canyon

**44** \*A fan-shaped (triangular) mass of sediment that is formed where a river enters a larger body of water like seas delta

**45** \*They are small solid materials such as sand, soil and small rocks that carried by water to another place. sediments

**46** A hill of sand created by the wind. Sand dune

**47** \*Part of plant grows inside cracks of rocks causing its weathering Plant root

**48** \*A gas in air combines with iron of some rocks and causes its weakness. oxygen

**49** \*The force that pulls down broken weathered rocks at mountain sides gravity

**50** \*They are tiny, like plants, live on rocks and produce acid as they grow lichens

**51** \*They are lowland areas in between mountains and have gently sloped sides around rivers valleys

**52** \*It is a special type of valleys which its sides are steep Canyon

**53** \*It is the landform that is formed by the effect of weathering and erosion due to wind, water or other factors. Canyon

**54** \*It is a very large and steep canyon which is found in United States of America. Grand canyon



55 It is the process by which the wind carves the rocks into different shapes. Erosion process

56 They are scientists who study rocks. Geologists

57 A land area that is formed by deposition process when a river enters a lake or a sea Delta

58 It is the landform that is formed by erosion and deposition of sand in sandy desert environment Sand dunes

59 The two processes that have the main role in the formation of canyon. Weathering and erosion

## QUESTION 06

## Give reason..... ?

- 1 A toy car needs battery to move.  
Because chemical energy (stored in battery) → electrical energy → kinetic energy which makes toy car move
- 2 Sound energy of hair dryer considered as wasted energy  
Because it doesn't help hair dryer to do its main function
- 3 When we use soap dispenser some energy change happens  
Potential energy stored in spring change into kinetic energy
- 4 Mars rover curiosity was operated for long period of time on Mars without any need to be recharged.  
Because solar panels use sun light to recharge its batteries
- 5 There is a change of energy when burning wood.  
Chemical energy (stored inside wood) changed into thermal energy
- 6 When you rub your hands, you feel warm.  
Kinetic energy changed into thermal energy
- 7 Thermal energy of mobile considered as wasted energy  
Because it doesn't help mobile to do its main function
- 8 Not all the energy that enters the energy chain reaches the device completely.  
Because some of energy wasted in the form of heat
- 9 Gasoline is burned inside a car engine  
When gasoline burned it produce Thermal energy, Thermal energy change into kinetic energy which cause car move

Next Concept



Cartoon science

**10** Wind considered as renewable resources of energy  
**Because it replaced quickly as we need it**

**11** Coal considered as non-renewable resources of energy  
**Because it used at a rate faster than they renewed**

**12** Smog of cars are very dangerous to human health.  
**Because it causes irritation of human's eyes and lungs**

**13** Fossil fuels cannot be replaced as quickly as they are used  
**Because it takes millions of years to form**

**14** Generator are important in electric power stations  
**Because it changes kinetic energy into electrical energy**

**15** The fuel is very important for different means of transportation.  
**Because fuel is burned inside the engines to produce thermal energy, Thermal energy change into kinetic energy which cause car move**

**16** Using wood as a fuel has negative effects on the environment  
**Because cutting tree cause deforestation**

**17** Farmers must decrease the use of pesticides  
**Because it causes pollution of water and soil**

**18** We must turn off lights that we are do not need  
**To conserve electricity**

**19** We feel warm at night when sun is not visible in the sky  
**Because atmosphere, land and water absorb thermal energy from sun**

**20** Dams are built on rivers  
**To control water flow and increase the potential energy of water to generate electricity**

**21** Humans used windmills and watermills from hundreds of years ago  
**To grind grains to make flour**

**22** Kinetic energy of wind affects the speed of wind turbine blades rotation  
**Because when kinetic energy of wind increase, the blades rotate faster, wind turbine generate more electricity**

**23** Water turbines are placed in waterfalls areas  
**Because kinetic energy of water rotate turbine and generate electricity**



**24** Rusting of iron of some rocks

Because of reaction between iron and oxygen of air

**25** Erosion and deposition are linked processes.

Because deposition is a process of laying down of sediments after its erosion

**26** Water play an important role in the formation of limestone caves.

Because water dissolves minerals in rocks then these dissolved minerals combine forming new shapes

**27** The Earth's surface is always changing

Because of weathering, erosion, deposition process by effect of water, wind and temperature change

**28** Lichens cause breaking down rocks

Because lichens produce acids that dissolve minerals of rock and break it down

**29** Plant roots play important role in mechanical weathering.

When rot grows inside the crack of rock, the crack become wider and rock break down

**30** Plants of wetland areas help in formation of deltas.

Because they help in increasing the rate of deposition process

**31** The oldest rock layers of Wadi Al-Hitan contain fossils of whales.

Because in the past, a deep sea was existed at Wadi Al-Hitan

**32** Trees and other plants are growing on both sides of small canyons.

Due to flow of water stream which is needed by plants to grow

**33** Geologists study the layers of sediment in rock formations.

To know how is the landscapes looked like in the past

**34** Geologists study the layers of rocks in the canyon walls.

To learn about kinds of living things existed there long ago

### QUESTION 07

### What happened if .... ?

**1** Your hand is approached to lighting electric lamp.

You will feel warm

**2** You turn on radio ( according to the change of energy)

Electrical energy change into sound energy



3 You turn on electric iron  
electrical energy change into thermal energy

4 You turn on television  
Electrical energy changed into sound and light energy

5 You use mobile phone for long time (according to wasted energy)  
Some energy is wasted in form of thermal energy

6 Battery of toy car run out  
Toy car cannot move so you must recharge it or replace it

7 You turn on an electric fan  
Electric energy changes into kinetic energy

8 The change of energy when you burn a piece of wood  
Chemical energy changes into thermal energy

9 Solar panels exposed to sun light  
Solar energy changed into electrical energy

10 The remains of marine were buried under the Earth's surface over millions of years.  
Oil and natural gas will form

11 People increase using wood a fuel  
It causes deforestation (negative effects on the environment)

12 Decomposition of remains of sea animals under the Earth's surface  
Formation of oil

13 The car fuel indicator if the amount of gasoline in a car decrease  
The car fuel decrease till the indicator refers to zero and the car stop

14 The car fuel run out  
The car speed decreases till it stops

15 Water of sea evaporates up to sky  
it condenses into clouds and rain may fall

16 Dams are built on rivers  
potential energy of water increase, when water move potential energy change into kinetic energy which rotate turbine and generate electricity

17 Wind doesn't blow in an area that contains many modern wind turbines  
The blades of wind turbines don't move and it can't generate electricity

18 The kinetic energy of a wind that is applied on the wind turbine increases  
the blades rotate faster, wind turbine generate more electricity



19 Sunlight falls on solar panels  
Solar energy changed into electrical energy

20 Growing of Lichens on rocks  
It produces acid that dissolve minerals of rocks and break it down

21 Formation of rust on some rocks  
The rock become weak and break down easily

22 To the shape of canyon after many years  
Some parts may break down by the effect of water

23 Sea waves hit sandcastle  
After few minutes sand castle will completely disappear

24 Acid rain falls on rocks  
Acids dissolve minerals of rocks and break it down

25 Plant roots grow inside the crack of rocks  
The crack become wider; rock break down

26 The layers of sedimentary rocks press down over long periods of time  
Formation of sedimentary rocks

27 A flat land, if a water stream flows over it.  
Small canyon may be formed

28 A river stream enters a sea.  
A delta may be formed

29 A river erodes the sediments of a mountain over a long period of time.  
A canyon may be formed

Next Concept

## QUESTION 08

## cross the odd word

1	Food – Battery – Lamp – coal	coal
2	weathering – deposition – evaporation-erosion	evaporation
3	Electric heater – electric iron – washing machine – hair drier	washing machine
4	water – wind – coal – sun	coal
5	Hand mixer – electric heater – hand bell – drum	electric heater
6	Gasoline – coal –wind - natural gas	wind
7	acid rain – lichens – oxygen – plant root (according to type of weathering)	plant root



## QUESTION 09

## Match

1

( A )		( B )		
1	Energy	a	solar energy	1-b
2	Solar heaters	b	it does not destroy, but transforms from one form to another	2-c
3	Solar panel input	c	It is used to heat water using the energy of the sun	3-a
		d	It is used to convert thermal energy into electrical energy	

2

( A )		( B )		
1	The sun	a	It is operated by electricity.	1-b
2	Benzene	b	Its light energy changes into chemical energy in plants.	2-c
3	The fan	c	It is a liquid that can be used as a fuel for cars.	3-a

3

( A )		( B )		
1	Coal	a	Solar energy	1-b
2	Water	b	Non-renewable energy source	2-d
3	Wind turbine output	c	Electrical energy	3-c
		d	Renewable energy source	

4

( A )		( B )		
1	Solar panels	a	use in cooking food by converting solar energy into heat energy.	1- c
2	Curved mirrors	b	It was used to grind grain.	2-a
3	Windmills	c	use to generate electricity from solar energy	3-b
		d	Convert kinetic energy into electrical energy.	



5

( A )		( B )	
1	Turbines	a	It was used to grind grain
2	Greenhouse	b	Convert kinetic energy into electrical energy
3	Windmills	c	It helps to grow crops that only grow in warm climates
		d	Non-renewable energy source

6

( A )		( B )	
1	The sun	a	from non-renewable energy sources.
2	Coal	b	From Factors affecting the formation of fossil fuels
3	Pressure and temperature	c	The main energy source on the Earth's surface.
		d	Converting wind energy into electrical energy

7

( A )		( B )	
1	Natural gas	a	Convert kinetic wind energy into electricity
2	Wind turbines	b	The main source of energy on the Earth's surface
3	Law of conservation of energy	c	A non-renewable energy source
		d	Energy does not destroy, but transforms from one form to another

8

( A )		( B )	
1	Fossil fuels	a	One of the ways to conserve fossil fuels
2	Solar Panels	b	A non-renewable energy source
3	Turn off appliances and lights when being outside the home	c	Converting solar energy into electricity.
		d	Source of renewable energy.



( A )		( B )	
1	sand dunes	a	A fan-shaped mass of sediment that is formed where a river enters a larger body of water like seas.
2	canyon	b	They are deep valleys carved by flowing water.
3	Delta	c	it is the land form by erosion and deposition of sand in sandy desert environment

10

( A )		( B )	
1	Deposition	a	It is a type of weathering through which acids of lichens dissolve minerals of rocks.
2	Chemical weathering	b	it is the breaking down of rocks due to the effect of rocks due to the effect of physical factors like wind, water, plant roots and temperature
3	Mechanical weathering	c	Process in which the sediments are dropped in a new location by the action of wind, water and gravity.

## QUESTION 10

## Correct the underlined words

1 Most of energy chains start with the moon. sun

2 We use thermal energy used to play a drum kinetic

3 To operate an electric mixer, we use sound energy electric

4 There is a stored thermal energy inside the food we eat chemical

5 Mars rover curiosity used to explore Earth planet Mars

6 Wood is a form of fossil fuel, that can be used in houses. Biofuel

7 In electric power station, wind turns turbines that produce steam

8 Fuel is the substance that produces electrical energy on burning thermal

9 Generator in the electric power station changes potential energy into electrical energy kinetic

10 Fossil fuel include oil, coal and wood. Natural gas

11 Water can be used to generate solar energy hydroelectric

12 The moon is the primary source of both biofuel and fossil fuel The sun

13 Rivers store kinetic energy potential

14 Water turbine rotate when their blades rotate as wind blow wind



15 Electricity generated by wind turbines is transmitted through wind wires

16 Thermal energy and sound energy are produced from the Sun light

17 Dams are built on rivers to generate sound energy electrical

18 Next Concept The movement of sediments from one place to another is erosion

19 known as weathering. weathering

20 Shaping the Earth is usually start by deposition process.

21 Oxygen in air reacts with iron of some rocks forming red

22 green-colored rust

23 When water freezes, its volume decreases increase

24 Carbon dioxide in the air always causes rust on rocks oxygen

25 Deltas are formed by weathering process. deposition

26 Dunes are lowland areas which have gently sloped sides Valley

## QUESTION 11

## complete using the words

1

(canyon – delta – chemical – mechanical )

1 In chemical weathering the structure of rocks changes due to chemical reactions .

2 In the mechanical weathering, the chemical structure of rocks doesn't change.

3 A delta is formed where rivers meet a sea.

4 canyon is a deep valley carved by flowing water.

2

(Wind – sedimentary rocks – sand grains )

1 Blowing of strong wind in the desert may form large sand dunes.

2 When layers of sediments mixed with mud and remains of plants and animals and over time these layers pressed down forming sedimentary rocks

3 Strong wind and hurricanes carry sand grains for a long distance.

3

(input – Dam – output -concave mirrors – electric )

1 In electric heater electric energy is considered as an input energy

2 Dam used to control the flow of water and increases the potential energy of water to generate electricity .

3 concave mirrors used to collect and focus sun rays to heat metal pots and cook food

4 The energy that is produced from the battery and used to operate a toy car is electric energy.



## QUESTION 12

## Answer the following questions

1

Rearrange the following steps to describe how coal is formed.

- a** The earth surface plants get old and died.
- b** The remains of the plants were decomposed and covered with sand clay layers
- c** Anciently, earth was covered with swamps where plants grow.
- d** Several layers of clays and sands were deposited on the remains of died plants.
- e** The buried plants were changed into coal due to the effect of heat and pressure.

**Answer:** c-a-b-d-e

2

Rearrange the following steps to describe processes that cause Earth's surface changes :

( Erosion- Weathering -Deposition)

.....Weathering – Erosion – Deposition.....

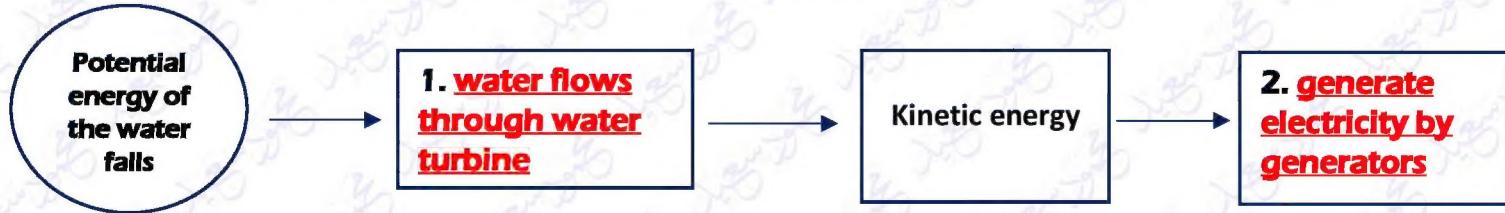
3

Complete the following model:



4

Complete the following model to describe the hydroelectric energy, and then determine the inputs and outputs of this system?



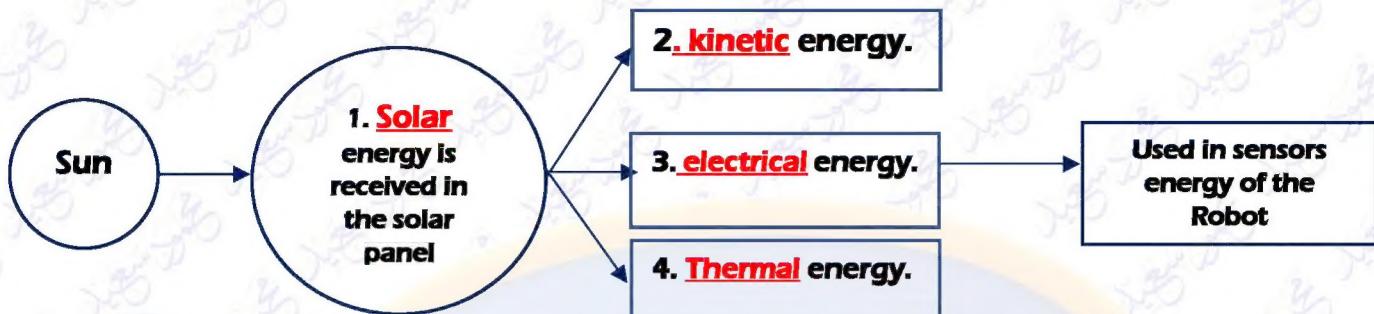
Inputs: **potential energy**

Outputs: **electric energy**



5

Complete the following model to describe the energy transformations in the Mars exploration vehicle, and determine the inputs and outputs of this system?

Inputs: solar energyOutputs: kinetic, electrical and thermal energy

6

Draw a model showing the energy chain system when using solar panels to light the roads. Define the input and output energies.

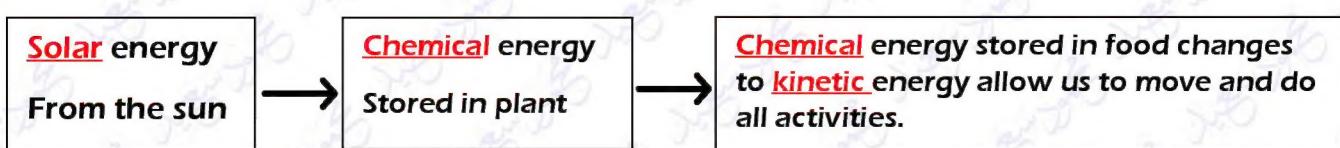
a System inputs: solar energyb System outputs: light and thermal energy

c What are the conversions of energy in this system?

Solar energy → electrical energy → light and thermal energy

7

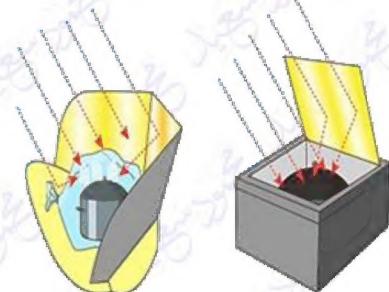
Complete the following energy chain:



8

The following figure represents a solar oven:

- a What is the type of mirrors that used in this device?  
Concave mirror (convergent mirror).
- b What is the importance of this device?  
It used to collect and focus sunrays to heat pot and cook food.



9

The following figure represents a solar heater

- a The input energy is solar energy
- b The output energy is thermal energy



10

Study the opposite figure then complete the following sentences:

- a This figure represents dam
- b It controls flow of water and increases the potential energy of water
- c When water fall water turbines rotate, it generates electricity



11

Study the opposite figures then complete the following:



Fig (1)

Fig (2)

Fig (3)

- a Figure (1) and (3) changes very slowly while figure (2) changes very quickly
- b After some hours, figure (2) disappears completely.

12

- a This figure represents canyons that formed in hundreds of years
- b weathering and erosion processes help in the formation of it.



13

**Study the opposite figures then complete the following:**



Fig (1)



Fig (2)

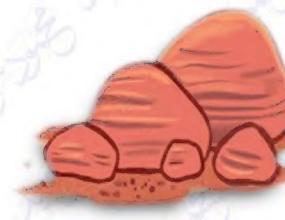


Fig (3)



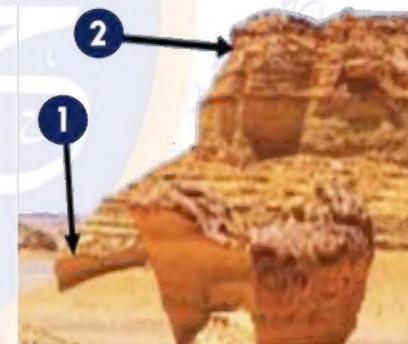
Fig (4)

- a** Figure (4) represents living organism cause mechanical weathering.
- b** Figure (1) represents living organism cause chemical weathering.
- c** Oxygen gas has a bad effect on rocks in figure (3).
- d** Oxygen gas has a bad effect on rocks in figure (3).

14

**Study the opposite figures then complete the following:**

- a** This place contained a (river- sea) in the past.
- b** The oldest rocks are found in number (1-2)
- c** Fossils of turtles exist in (1-2)



تم بحمد الله ،

بسم الله الرحمن الرحيم "إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ إِنَّا لَا نُضِيعُ أَجْرَ مَنْ أَحْسَنَ عَمَلاً" صدق الله العظيم

